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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/865,190	07/23/2001	Richard R. Hertzog	047144-0009-05-US	1636

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EXAMINER	
PACKARD, BENJAMIN J	
ART UNIT	**PAPER NUMBER**
1612	

MAIL DATE	DELIVERY MODE
10/06/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/865,190	HERTZOG ET AL.	
	Examiner	Art Unit	
	Benjamin Packard	1612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *7,29,36 and 39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7,29,36 and 39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112 – New Matter

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 7, 29, 36, and 39 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

First, “A cumene oxidation product that contained 81.6 weight percent CHP, 5.00 weight percent DMPC and 0.40 weight percent acetophenone” (pg 19, Example 1 lines 13-16) does not provide adequate written description for the new limitations of "about 80 wt% cumene hydroperoxide" and "up to 5 wt% dimethylphenyl carbinol (DMPC) and acetophenone”, given the term “about” was not presented in the original disclosure, nor were the weight percentages now claimed. Where the weight percentages are modified by "about", their claimed subject matter results in broader values than the originally disclosed values.

Second, the acetone solution containing “up to about 0.05 wt% sulfuric acid” similarly does not have adequate support where the original disclosure only provides support for the specific values 0.05 wt% and 0.0512 wt% sulfuric acid (pg 3 lines 25-26 and pg 10 lines 21-22).

Finally, the decomposition reactor ratio of "about 7:1" does not have adequate written description where a single disclosure of the ratio 1.62 parts to 0.230 parts is taught. Again, the disclosure of a single ratio does not adequately support the broader claim limitation of "about 7:1".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Claims 7, 29, 36, and 39 are rejected under 35 U.S.C. 103 as being unpatentable over Sifniades (US 4,358,618) and Messina (La Chimica E L'Industria, V. 65, N.A, Gennaio 1983).

Sifniades and Messina are discussed in the interference No. 104,831 document 110 pgs 14-19, which are incorporated herein by reference.

Applicants assert claims 7, 29, 36, and 39 contain the limitations which were found allowable by Final Decision of the Board of Patent Appeals and Interferences.

Examiner disagrees. First, upon review of the Final Decision of the Board of Patent Appeals and Interferences (see Board Paper No. 110 pgs 56-57), the claim limitations found "not obvious" in light of the art in the preliminary motion were a specific embodiment (see for example claim 30 of the originally filed claims), but the instant amendments have now been broader the ranges and removed some components, thus not the same as the subject matter reviewed by the Board of Patent Appeals and Interferences. Additionally, the reasoning for holding the claims non-obvious was not based on art, but due to the moving party attempting to improperly shift the burden. While in the interference the moving party failed to meet the burden, such a holding is not binding on the Office which can now reject the claims based on the prior art. As such, Examiner now addresses the amended limitations.

With regards to the cumene oxidation product feedstock, Sifniades discloses mixing a feedstock of 83 wt% CHP, 3wt% DMCP, 0.4% acetophenone, and 0.2 wt% DCP in cumene (col 3 lines 34-37). The other solution comprises 1 wt% water, 75ppm sulfuric acid, and AMS (col 3 lines 38-42). Sifniades further discloses routine

optimization of adjusting the concentrations of the various components to adjust the percentage of unreacted CHP (col 3 line 68-col 4 line 6). Sifniades also teaches converting both DCP to AMS and DMPC to AMS at the same temperature, thus making the convenient to do the whole reaction at a constant temperature, i.e. essentially non-isothermal (col 3 lines 1-18)

Sifniades does not appear to disclose the recycling of the acetone solution or ratio of components added to the reactor.

According to the Board decision, it appears the recycling of at least a portion of acetone collected from the reaction into the cumene hydroperoxide composition step would be obvious as taken in light of well-known chemical and engineering principals (see Board Paper No. 110 pg 45 and 55-56). Further, it would be obvious to one of ordinary skill in the art to follow the teaching of Sifniades in optimizing the flow of both components in order to optimize the unreacted CHP, thus making the claimed ratio obvious.

Conclusion

No claims allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin Packard whose telephone number is 571-270-3440. The examiner can normally be reached on M-F 8-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frederick Krass can be reached on 571-272-0580. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Benjamin Packard/
Examiner, Art Unit 1612

/Frederick Krass/
Supervisory Patent Examiner, Art Unit 1612